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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

July 1, 1916.

WEEKLY STATION REPORTS
DRY LAND AGRICULTURE INVESTIGATIONS
July 1, 1916.

Reports for Week ending June 24.

Akron

The past week has been quite favorable for plant growth. Spring wheat and oats are heading. Corn and the forage crops are growing nicely. Alfalfa is blossoming but has made very little growth. Maximum temperature for the week 90, minimum 40 and precipitation 0.73 inch.

Amarillo

Cultivation of row crops has been the main bill on the program for this week. Milo and kafir, D.L.A. plats were gone over with the hand planter to fill in missing spaces. Stands were fairly complete except in the listed plats.

Since recent rains, weeds have made good growth. Our new Fowler cultivator has just been received and we shall put it to full test as a weed destroyer. It is hoped that it will prove effective in this respect and if so it will be of great advantage in that it does this work without much stirring of the soil.

Winter small grains were harvested during the week, the straw being very short so that a good job of binding was impossible especially with the wheat.

Homer Martin who has been here in charge of the water requirement work, on account of ill health finds it necessary to take a vacation and Mr. Geo. Crawford from Akron has come to take his place. Dr. Shantz was here a few days arranging for this transfer.

The writer took a trip south to Plainview and Lubbock and found harvest operations in these sections quite well along and threshing has commenced. Wheat is yielding around 20 bushels per acre and is of excellent quality. Around Plainview an inspection was made of the work of a land syndicate that is in charge of some 70,000 acres of land upon which improvements are being made and wells drilled with pumping plats installed for purpose of irrigation. Wells are sunk down to 250 feet or more and crude oil engines of 50 and 60 horse power operate the centrifugal pumps. The experiment will be watched with interest to see if the water supply holds out and if so, to what extent this sort of irrigation farming will prove profitable, compared with dry land agriculture which in this section has been very successful.

Weather for the week has been hot, dry and windy. Maximum temperature 101 on the 21st, minimum 56 on the 21st and 22nd, wind velocity 9.3 miles per hour, precipitation 0.09 inch on the 22nd, and evaporation 2.741 inches.

Ardmore

A rainfall of 1.01 inch on June 20th has put all crops in excellent condition. None of the crops were particularly suffering for the want of moisture, but the surface of the ground was getting dry.

The week has been unusually warm for this season of the year.

A perfect stand of corn was secured, and it is making a very rapid growth.

Oats has headed at a height varying from 6 to 14 inches depending upon the previous preparation of the ground.

Spring wheat has not begun to head and will make a very good crop.

Winter wheat will make the best crop of winter wheat that has been produced at Ardmore.

Bellefourche

The past week was wet and cool as a whole. Rain fell on four days of the week. The total precipitation was 1.71 inch. Nearly all of this was taken into the soil, there being practically no run-off. Small grains made vigorous growth. Barley and oats are in the boot and wheat is in the second leaf. The few plats that were injured by drought before the rains commenced have recovered to some extent but are still far behind the rest of the plats.

Soil samples show that the first two feet of soil are still well supplied with moisture.

Sorghum came up the latter part of the week.

Alfalfa and brome grass are much later than usual but will be ready to cut next week.

Maximum temperature 77, minimum 42.

Big Springs

Maximum temperature for the week 105, minimum 61, wind velocity 9.9 miles, evaporation 3.17 inches, and precipitation 0.71 inch. Of the above precipitation 0.69 inch fell on Monday evening and was accompanied with considerable wind that packed the surface soil badly and did considerable damage to young crops by the severe whipping of the wind. The rain was not sufficient to make moisture meet on level land, but the open listed furrows collected enough water to soak down several inches. A few plats of cotton in the rotation series on spring plowed land were replanted. Mexican June corn and Dwarf broomcorn were planted on the CC and rotation plats devoted to these crops. Mexican beans were planted in the rotation series. Several acres of hegari was planted in the north field for feed. Sudan grass is beginning to head out and will be short unless more rain occurs within the next few days. High winds and hot days make conditions unfavorable for crop growth.

Dalhart

The weather has been very warm and several of the small grain plots are beginning to ripen but are very poorly filled and it is probable that none of the plots will get tall enough to cut with the binder and several of them will not be cut at all as there will be no heads and only a few pounds of straw. All of the crops that were replanted are coming up nicely with a good even stand. The corn is about 30 inches high but the sorghum crops are growing slow and are from 2 to 10 inches at this date. Weeds have been growing rapidly since the rain and quite troublesome.

Maximum temperature for the week 97, minimum 55, and precipitation 0.02 inch.

Dickinson

Maximum temperature for the week 77, and minimum 41.

The weather for the past week has been cool and rainy, the total rainfall for the week was 2.43 inches, 1.42 inch of which occurred on the 23rd.

Director Cooper of the North Dakota Experiment Station, Alfred Wentz writer for the Dakota Farmer and John Sarvis Agronomist at the Mandan Field Station visited the station on the 24th.

Edgeley

Lining out the D.L.A. plats on the station was finished the first of the week. Very little other field work was done during the week. Light showers occurred Wednesday and on Thursday there was a more or less steady rain all day. The fields were not sufficiently dry to work the rest of the week.

Spring rye is heading, and some of the other grain is beginning to form straw. Everything is very short, except the grasses, the alfalfa, and the clover. Corn is apparently even farher behind than last year. The month has so far been slightly warmer than last year, but the past week has been the coldest for this late in June that has been recorded here.

Mr. Burr visited the station Wednesday. Mr. Thompson leaves today to speak at a picnic about 150 miles northeast of here.

Maximum temperature for the week 72, minimum 48, and precipitation 1.60 inch.

Garden City

The long dry spell in this section of the State has been broken at last, but rain came too late to be of much benefit to small grains. Practically all of the small grain plats, except on the fallows had dried up, and were mowed the latter part of the week. Winter wheat on the fallows is ripening and will be harvested with the mower sometime this week.

All small grain plats will be double disked after harvest to keep down weed growth. Experience with many high winds this season has indicated that were are not troubled with soil blowing to the extent of many of the other stations.

The heavy, dashing rains the forepart of the week has made it necessary to seed some of the listed plats for the third time.

All rowed crops are now making a rapid growth.

Grasshoppers, blister beetles and Colorado potato beetles are numerous on the station, but with the use of arsenicals we probably can keep them under control.

Maximum temperature for the week 96, minimum 49, average wind velocity 2ft anemometer 10.9 miles, 8ft, 15.7 miles, evaporation 3.313 inches, and precipitation 2.50 inches.

Havre

With a maximum temperature of 77 on the 19th and a minimum of 44 on the 22nd and with precipitation amounting to 1.53 inch, recorded on 5 days of the past week has aided the crop conditions. Winter wheat and barley are headed and the spring wheat is in the boot stage. Corn seeded on the 31st of May is a more uniform stand and is at present more advanced than that seeded on the 16th of May. Winter rye was turned under for green manure during the week. Sod land which is being broken is in excellent condition for plowing.

Hays

Maximum temperature for the week 93, minimum 56, and precipitation 2.43 inches, total for four rains. Temperature during the week was quite changeable, windy part the time.

Wet weather prevented any field work until Thursday. A part of the west border belt was cultivated and planted to feterita for the third time. Half of the corn on reserve plats was cultivated. All corn and sorghums plats were cultivated Friday and Saturday.

During the wet weather the first part of the week the interior wood work of the laboratory and office was cleaned and varnished, laboratory table repaired and covered with zinc, and a new 120 can capacity asbestos soil oven was installed in place of one of the old type 60 can sheet iron ovens.

Hays (continued)

Most of the plats of winter wheat are now ready for harvest but rain again last night (Saturday) and threatening rain today will delay harvesting as the ground is already too wet to bear weight of machinery.

Huntley

Because of heavy precipitation during the week very little field work was possible. A 1.83 inch rain fell in three showers, the first of which was .28 inch, second 1.28 inch and the last .27 inch. All fell as gentle showers and there was no run off. Winter wheat that was dried up in the boot has fully headed but practically every head is 1/3 to 1/2 blighted. Oats is heading though it is very short and peas for green manure are in the pod and will be plowed under soon. Peas on field G are about ready to turn the hogs on to and this will be done as soon as possible. The rye plat on which the hogs now are, dried up badly last week and little feed was available. When weighed on Monday the average daily gain per pig was only .25 pound as against 1.11 pound for the previous period. Since the recent rains, however, the rye is shooting out again and the pigs are busy.

Visitors during the week were Mr. Robt. Wilson of the Mandan station and Mr. W. W. Burr.

Maximum temperature 91 and minimum 42.

Lawton

Report of the Lawton Field Station for the week ending June 24 is as follows:

Up to Saturday night the week has been hot and dry and corn, alfalfa and sweet clover have suffered very noticeably. However, decided relief has come to all crops in the form of a rain on Saturday night and Sunday morning amounting to 2.55 inches. The rain came fast and hard, accompanied by a strong wind and had it not been for the fact that all of the land on the station was in good tilth and in a receptive condition to rain fall there would have been much loss by run off. This rain has also furnished much stock water which was getting low through out the country. Pastures and hay lands were also getting pretty dry.

On the 22nd and 23rd, the following plats were replanted on account of crops being destroyed by chinch bugs: MC-A and B and part of C feterita, MC-A and B and part of C Broom corn, 201 B milo, 274 D and 275 D kafir, 255 A and 256 A kafir, 250 A-251, A-252, A-253 A-254 A corn, and eight plats of kafir in the methods of listing. Practically all of this ground had to be disked or cultivated before planting and the dashing rain of 2.55 inches

Lawton (continued)

washed most of the plats to such an extent that in all probability they will have to be replanted as soon as the ground is dry enough. MC sorghum plats were planted on the 22nd. Sorghum on Rotation 133 and 134 were planted on the 20th. The last date of seeding of soy beans and cowpeas, grain sorghums, and forage crops were planted on the 20th.

Spraying for chinch bugs has been discontinued due to the fact that only a small percent of the bugs were being killed and the plants were suffering and some of them being killed by the solution that was applied. During the last week, however, an aphis that is quite destructive to kafir, milo, feterita, broom corn and other sorghum crops has appeared by the millions. The following spray solution has been successful so far in combating this attack: Water 50 gallons, soap 5 bars (any good cleansing soap). Nicotine sulphate, known as "black leaf 40", 4 ounces. This is being applied at the rate of about 150 gallons to the acre.

Mandan

The week's operations consisted mainly of hoeing, cultivating and breaking.

A rainfall of 1.23 inch on the 22nd and 23rd came at a most acceptable time, as the ground was beginning to get rather dry.

All crops are in excellent condition.

Visitors at the station during the week were Mr. W. W. Burr and Mr. Thomas Cooper.

Mr. Sarvis accompanied Mr. Cooper on an overland trip of about a week's duration to Williston and intervening points.

Mr. Robert Wilson, P. W. Bastine and Victor Lindor recently reported for duty in the North Dakota State Militia.

Maximum temperature for the week 77, minimum 41, and precipitation 1.36 inch.

North Platte

The forepart of the week was cool and cloudy with but little sunshine. The last three days have been excellent for crop growth. First cultivation of corn has been completed. All spring grains are heading. The straw is of a good length but not rank enough so that lodging is apt to occur.

Maximum temperature 82, minimum 42, mean 62, and precipitation .62 inch.

Mr, Fritz Knorr, Superintendent of the Mitchell Station, visited this station yesterday.

Scottsbluff

The weather since the hail on the 12th has been unfavorable for crop growth. The spring grains are recovering very slowly. All plats seeded this spring were gone over with the weeder. Corn has been cultivated for the first time. Cane was reseeded on the 15th and sweet clover will be reseeded today.

Precipitation 2.06 inches, which fell on the 12th.

Sheridan

Twelve acres of sorghum was sown.

The teamster's cottage was enclosed ready for plumbing and lathing.

Little progress was made on the barn, but work was begun on hauling and excavating for the office and residence.

Fencing and ditching continued.

One horse died, presumably from an attack of spasmodic colic.

Tucumcari

The work for the week ending June 24 has consisted of thinning out crops to a uniform stand. This has been completed. Most of the row crops have been single harrowed this week and such crops as beans and cowpeas have been cultivated. Oats and winter wheat have been harvested. The wheat was very thin and very short but the heads were well filled and the grain plump. Wheat on Rotations 211 and 212 is so short that it cannot be cut. Wheat on winter wheat A is also too short to cut. All oats were very short but all except Plat A of Rotation 2 were cut. This plat was too short. The small grains on Fall Plowing and on disced land are better than the late plowed plats, in nearly every instance, this year. Oats were of the following heights: Rotation 1, 14", Rot. 2, none, Rot. 3, 13", Rot 5, 15", Rot. 6, 14", Rot. 7, 10", Rot. 8, 15", Rot. 9, 10". Winter wheat was the following heights: Plat A, none, Plat B, 12", Plat C, 14", Rots. 211, 212, none. These grains were all too short to cut with the binder and too short too cut with the mower and rake. We have a mower buncher attachment but the grain was too short for this as it would go through the fingers. In order to cut the grain we used the mower with the buncher attachment and made a piece of canvass just the size of the buncher. By using this canvas on the buncher and driving against the wind every "through" we were able to get practically all the grain from each plat.

In taking soil samples this week the ground came out almost in powder for the first foot. There is practically no available moisture in either of the first two feet and it surprises me to see

Tucumcari (continued)

how well the row crops are standing the drouth. Except for early corn, there are no row crops which appear to be suffering for lack of moisture.

The weather continues warm and dry with no prospects for rain. According to available weather records, years having as dry winters and springs as we have had this year, continued to be very dry until late in July.

Maximum temperature for week 100 degrees on the 19th, 20th, and 22nd, minimum 55, average wind velocity 7.4 miles per hour, precipitation , none, and evaporation 3.412 inches.

From January 1 to May 31 we are 2.27 inches below normal in amount of percipitation. The average for the month of June is 1.66 inch, while we have had but .26 inch of rain up to date this month. We have not had a soaking rain all spring. Practically all the precipitation so far this year has been in small showers which wet down only a few inches and dried out about as soon as it fell.

Williston

A total of 2.1 inches of rain fell in three days of this week, giving us a large amount of moisture, and bringing the total precipitation for the month above the normal to date. It has been cool the entire week, but today has warmed up well after the rains. Warmer weather is badly needed for corn and other crops aside from the grains.

Maximum temperature 80, minimum 43.

Mr. Sarvis of Mandan with Director Cooper are here making a preliminary study of the native grasses.

Woodward

Great difficulty has been experienced the past week in keeping the soil from blowing. The continued rains make it almost impossible to work the soil many times when the surface is dry but the subsurface is saturated with water.

Work the past week has consisted in putting grounds around buildings in shape and cultivating to stop blowing.

Practically all crops planted by farmers in lister rows are again washed out.

Rainfall for the month to date, 10.26 inches.

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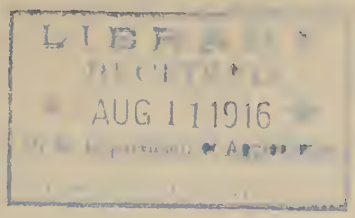

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JUL 3 1915

WEEKLY STATION REPORTS
DRY LAND AGRICULTURE INVESTIGATIONS
July 8, 1916.

Reports for Week ending July 1, 1916.

Amarillo

Cleaning weeds from the row crops has been the main business again this past week. Most of the winter grain plats have been harvested and harvesting of the spring grains will commence next week, the ripening process having gone on rapidly during the past two weeks of hot dry weather. Since replantings made in the D.L.A. row crops have shown up, these present good stands and are making fair growth although the blades roll considerably during the hot days. All weed growth between the rows was cleaned out in good shape with our new knife cultivator - of which mention was made last week. The main objection we find to it is difficulty in management for lateral and depth control. It will also require that the blades be kept sharp to do good work. Clearing weeds with this implement from the fallow plats was accomplished to much better advantage than could have been done with the disk. Hoeing weeds from in the rows and thinning of the row crops was started this week.

Weather for the week was uniformly hot and dry with constant southerly winds daily. Maximim temperature was 97 on the 29th and 30th, minimum 60 on the 25th and 27th, hourly wind velocity 10.8 miles, precipitation a trace, and evaporation 2.925 inches.

Weather summary for June:

Maximum temperature	101	
Average maximum temperature	86.4	
Minimum temperature	51	
Average minimum temperature	56.2	
Mean for month	71	(1 below normal)
Average hourly wind velocity	9.3	(.4 above 10-year normal)
Precipitation	2.70	
Evaporation.6ft tank	10.661	(above normal)
Evaporation 8ft tank	10.402	

Archer

June 17.

Maximum temperature for the week, 83, minimum 42, mean maximum, 73, mean minimum 44, evaporation 1.834 inch, average wind velocity 6.5 miles, and precipitation .33 inch.

June 24.

Maximum temperature for the week, 83, minimum 34, mean maximum 77, mean minimum 45, evaporation 1.766 inch, average wind velocity 7.4 miles, and precipitation .06 inch.

July 1.

Maximum temperature 92, minimum 51, mean maximum 87, mean minimum 55, evaporation 2.300 inches, average wind velocity 6.3 miles, and precipitation 0.

Archer (continued)

Dry weather has been common talk here this spring and is receiving more attention each day. June, with its .48 inch of rain has been the dryest, excepting in two other years, of 46 years. The mean temperature for the month has been lower than normal.

Ground squirrels and jack rabbits have damaged several plats of small grain very badly. They chew off the shoots which are about to head, letting them lay, and proceeding to the next without eating any of the fallen shoots. In this way they have damaged 1/3 of barley in rotation 7, and smaller areas on several plats. We have used all methods that we know of, to rid the station of these pests, but they are still quite numerous.

Winter wheat heads on the 16th, and is trying to fill, but drouth has caused it to fire badly. Without an early rain it will be a failure.

Spring wheat has made a very rapid growth on most plats and is in the boot. It shows no serious effects of drouth.

Oats have made a very slow growth, and is fired badly. It has a very uneven stand on the different plats. Flax, also has an uneven stand on different plats, but is making rapid growth.

Winter rye was turned under during the past week at a height of 36 inches. In other years it has been 50 inches or more.

Corn was cultivated during the week of the 17th, and is making a good growth.

Russian thistles have made the most promising growth of any crop on the station, and are growing every where, even on sod in some places. Spring plowed plats have very few thistles on them, while disked corn land has more. Fall plowed land is covered with them, while listed land is still worse.

The brome grass plats were cut on the 19th, with a yield of only 1/3 of a ton.

Alfalfa plats will make a still lighter yield.

Colby

Report for week of June 24.

The week has been the wettest of the season. Over and inch and a half of rain fell and it has been cloudy most of the time. All crops have improved considerably in the past week. All the spring grains are headed out and winter wheat is filling rapidly. A variety of winter wheat secured from the Nebraska station last fall will be ready for the binder by the middle of next week. It is a hybrid resulting from crossing common red Turkey with kharkov. All the stands of corn were counted this week and the corn was cultivated a second time. It is about a foot high.

Weather for the week:- Maximum temperature 96, minimum 45, average hourly wind velocity (8') 10.9 miles, (2') 7.4 miles, evaporation 1.766 inch and precipitation 1.63 inch.

Colby

Report for July 1.

This has been a week of high temperatures, high winds, and clear, dry weather. All small grain crops are ripening rapidly. Winter wheat, "Nebraska No. 28" was harvested Thursday. The rest of the winter wheat will be ready for the binder by the end of the coming week. Milo was planted for the third time Wednesday. The second planting of kafir came up but the stand will not be very good. Grasshoppers are plentiful. Poisoned bran has been spread for them twice during the last week. The second crop of alfalfa under irrigation is getting a good start.

Weather for the week:- Maximum temperature 97, minimum 57, average hourly wind velocity (8') 14.4 miles (2') 10.2 miles, evaporation 1.92 inch, precipitation T.

Weather for the month:-Maximum temperature 97 on the 28th, minimum 39 on the 8th, mean maximum 80.5, 1915 75, mean minimum 53, 1915, 53, mean 66, 1915, 64, evaporation 7.153 inches, 1915 5.843 inches, precipitation 3.15 inches, normal 3.17 inches, 1915 4.03 inches.

Dalhart

The past ten days has been one of the most severe periods, on crop growth, of similar duration that we have had during the past six years. During this time the wind velocity has averaged a little over 11 miles per hour, with a total evaporation of 5.035 inches, the average maximum temperature being 94.7. None of the crops are making a satisfactory growth and the corn is drying out fast, the sorghums being small are not suffering so much as the corn. The winter rye from rotations 84, 87, 88 and 89 was cut during the week but the yield will be very light and it is probable that this will be the only small grain that will make any yields.

Maximum temperature for the week 101, minimum 53, and precipitation).

Edgeley

Warm weather with frequent local showers in some localities consisting of heavy rains, but only light sprinkles at the station, characterized the greater part of the week. The last two days were clear and warm.

All crops have been growing well. Soil samples taken the last of the week showed a plentiful supply of moisture on hand. (It has gained about one inch since). All of the alleys on the station, and all the D.L.A. corn was cultivated once during the week. The alfalfa on rotation 42 was mowed Wednesday, but the frequent showers have prevented its curing to any extent.

Edgeley (continued)

The mean temperature for June was 58, just two degrees warmer than the same month last year, which was the coldest on record here. The average mean for the month for the period 1907 to 1915 is 63 degrees. The average minimum temperature this year was 47, while the average for June during the period named is 52, and the maximum 69 against an average of 76. The total precipitation for the month was 3.01 inches, .49 inch below the average. The total precipitation for the year to the last of June is 10.7 inches, just one inch above the average from 1901 to 1915.

Maximum temperature for the week, 87, minimum 48, and precipitation .37 inch.

Garden City

The dry hot weather of the past week has dried out the surface soil very rapidly, and has been rather severe on growing crops, causing them to curl during a considerable portion of the day.

All of the small grain plats, excepting the spring wheat, have been cut over with the mower. Out of about sixty-five plats of small grains seeded on the D.L.A. project only about thirty will be threshed.

Harvesting of winter wheat on irrigated land in this vicinity has just begun.

The seed bed work with the sorghums during the past two years has shown the value of killing all weed growth, and the securing of a good seed bed before planting. This applies especially to methods of seed bed preparation by listing. It has been practically impossible on the station to secure a stand of kafir on single listed land.

Field work for the week has consisted principally of mowing small grain plats, cultivating rowed crops, and thinning of sorghums.

Maximum temperature for the week, 98, minimum 60, average wind velocity (2') 13.5 miles, (8') 18.2 miles, evaporation 2.893 inches, and precipitation .40 inch.

Hays

Weather is gradually warming up. Maximum temperature for week, 98, minimum 59, and precipitation .92 inch on June 26th. During the first part of the week the ground was too wet for any kind of field work.

Wednesday, Thursday and Friday all plats of winter wheat, oats and barley were harvested in good condition.

Soil samples of winter wheat plats was commenced Saturday. Nitrate determinations were made on 10 of the winter wheat plats Wednesday.

Hays (continued)

Grasshopper war has commenced in ernest on the D. L. A. project. One hundred and sixty pounds of poison bran was spread over the project, Monday and 100 pounds more was spread Saturday. It is apparent more will be needed the first of next week.

A few colonies of blister beetles have been destroyed by us of gasoline and matches. There are a few more colonies still at large on the project.

Corn is beginning to tassel. It is wilting considerable on account of hot weather. The ground has plenty of moisture in it yet, but the roots apparently are unable to take up moisture rapidly enough to prevent the plants from wilting.

Hettinger

Fair warm weather the past few days has caused the corn to shoot up very fast. Barley varieties and a few oat and wheat varieties are headed. Alfalfa was cut today. The past week has been a busy one as we had charge of 35 boys in camp here. This camp was very successful and plans are being made for a bigger one next year. Visitors who assisted in instrctional work were Director Cooper, Alfred Wenx of the Dakota Farmer, Mr. Sarvis and Mr. Pfaender of Mandan.

The camp was concluded by the first annual station picnic which attracted the largest crowd that has assembled in Hettinger since the lot sale, say the old timers. Mr. Pfaender of Mandan gave the main talk, taking as his subject, "Making Homes on the Prairies". We recommended Mr. Pfaender for anyone wanting first hand information on tree work.

Huntley

Ideal growing weather prevailed during the past week and all crops made good progress. All spring grains are fully headed and flax is in bloom. Peas were plowed under in the green manure rotations as was sweet clover in rotations 31 amd 32. Thinning of corn and cleaning of alleys was started. Hogs on dry land pasture were moved from the rye to the pea plat and are taking to the new forage vigorously.

Temperature for the week, maximum 87, minimum 44, and precipitation .07 inch.

Lawton

Excellent weather has prevailed during the past week and work has progressed on the station in a very satisfactory manner. Cotton and corn have been growing rapidly since the heavy rain on the 24th. Practically all of the sorghum crops are looking bad on account of chinch bug and aphis injury. Sweet clover and alfalfa have made a decided improvement since the rain. The alfalfa was clipped on the 26th. Cultivation of all rowed crops except corn in Field B and Field C was a couple of days.

Lawton (continued)

All small grain crops were threshed on the 28th to the 30th. The yields are as follows:

Winter Wheat, Field A

Plat	Yield per Acre, Bushels
MC-A	6.8
MC-B	5.8
MC-C	5.2
MC-E	4.7
MC-F	6.3
MC-G	5.6
MC-H	5.0
249-B	7.0
250-B	6.5
251-B	5.9
252-B	3.8
253-B	6.0
254-B	5.7
142-B	15.1
274-B	14.8
275-B	19.3
134-B	16.3
133-D	10.5
Average 18 plats	8.4

Spring Wheat, Field A

1-C	8.9
4-A	7.5
3-C	8.0
9-A	4.8
2-C	8.3
5-C	8.7
8-A	2.0
Average, 7 plats	6.0

Barley, Field A

7-A	26.3
6-C	20.0
Average, 2 plats	23.6

Oats, Field A

1-A	41.7	
6-A	36.9	
4-C	33.0	
3-A	43.4	
7-C	44.7	
9-C	38.0	
2-A	50.8	
5-A	41.6	
8-C	43.4	
142-F	41.4	
133-B	47.0	
134-D	46.9	
276-B	10.3*	(not included in average)
Average, 12 plats	42.4	

Lawton (continued)

Kherson oats in Field C made approximately 12 bushels per acre. Texas red oats in Field B, made about 29 bushels per acre. Texas red oats seeded on all rotation plats.

The following plats were replanted on July 1: MC A-B-C-E Milo; 276 B, kafir, MC-C, feterita, 9-B, corn.

Maximum temperature for the week was 93, minimum 70.

The wind velocity for the past week has been much lower than for any other week during the month.

Mandan

The larvae of the poplar beetle are proving rather destructive to poplars and willows on the station. Judging from requests received for remedial measures, the insect has a wide distribution. An arsenta of lead spray applied at the rate of $2\frac{1}{2}$ pounds to 50 gallons of water is effective. Arsenate of lead is preferred to Paris green as it adheres to the foliage better.

The new horse and cow barn has been completed.

The corn and forage crops have been given cultivation during the week.

Breaking has been continued with our teams and a large and a small tractor employed for backsetting and breaking additional land.

Mr. Pfaender is spending twi days at Hettinger where he will give an address at a farmers' picnic.

Mr. Sarvis returned to the station Wednesday from his trip with Mr. Cooper.

Winter rye on green manure in rotations 14-15 was turned under for green manure June twenty-first. This is about $4\frac{1}{2}$ tons per acre, at a height of 50 inches.

Maximum temperature 81, minimum 49, and precipitation .55 inch.

North Platte.

The first spell of hot, dry weather for the season has developed during the week. The skies have been clear and the wind has blown steadily from the south for six consecutive days. Temperatures have gone above 90 for the past four days. The reserve moisture from rains early in the month is being rapidly used up. The most noticeable damage is being done to oats in which many parts of heads are blighting.

Corn stands on the plats are being thinned to count. With one or two exceptions perfect stands have been secured on all plats.

A dairy-silo trip organized through the efforts of the North Platte Chamber of Commerce was conducted to various parts of the county on Tuesday and Wednesday of this week. There were 56 automobiles in line the first and 71 the second day. A total milage of about 150 miles was covered. Dean Burnett and several men of the

North Platte (continued)

Extension Department of the State Experiment Station were along and discussed dairy and silo questions at the various points where stops were made. Each silo owner gave data as to cost of construction and filling of his silo and his experience in feeding silage to various farm animals. A great deal of interest was manifest and it is thought that a number of silos will be built this fall as a result of the trip.

Weather data for the week: Maximum temperature 92, minimum 53, mean 73, precipitation trace, evaporation 2.346 inches, and hourly wind velocity 10.3 miles. Precipitation for month of June 4.26 inches. June has been the only month since February in which there has not been considerable deficiency in rainfall.

Williston

All crops making good headway, even the corn has advanced with the recent warm days and nights. Irospects are now very good for good yields in this section. The rye in the green manure plats was plowed under Tuesday. Weeds are making rapid headway due to the impossibility of cultivating for the past ten days because of wet weather.

Maximum temperature 83, minimum 43, precipitation for the week 1.58 inch, and for the month of June 4.73 inches, or 1.2 over normal.

Woodward

Work the past week has consisted of planting cowpeas and of general cultivation. It has been hot and dry for the first time in a month and ideal weather for killing weeds, so considerable progress has been made in cleaning up the station.

Most farmers have let their crops stand, though on some fields there is hardly a sorghum plant every rod, due to the lister furrows washing out or filling in during the past month.

Wheat is being harvested and the yield is very low.

All winter wheat, spring wheat and oats will be threshed next week if weather permits.

Tucumcari

Maximum temperature for the week 103 on the 25th and 30th, minimum 63 on the 27th, average hourly wind velocity 8.1 miles, and precipitation .37 inch. Evaporation 3.109 inches.

The principle work for the week has consisted of cultivating crops and in running through all row crops with a hoe.

The weather continues hot and almost dry. The rain of this week came in two showers, one .19 inch and one .18 inch. Aside from bettering the atmospheric conditions, they did practically no good.

Tucumcari (continued)

Up to the 1st of June the rainfall has been 2.27 inches below normal this year, and with a deficiency of 1.03 of one inch in June we are now short 3.3 inches for the first six months of 1916. Since the spring and early summer months are generally driest, this shortage or 3.3 inches represents a large per cent of the normal rainfall for this period. The normal rainfall for the first six months of the year is 6.83 inches.

While crops on the station are still alive, still in nearly all cases the crops are rolling badly and except for the cowpeas, will not be able to last much longer.

Mr. Beatty, County Agricultural Agent for Union County, N. Mex., visited the station on June 30th, driving over 200 miles over some of the roughest roads in the country for this purpose.

Akron

The past week has been very hot and dry. Nearly all small grain is suffering badly from drought but summer fallow may fill fairly well. Some wheat fields are turning rapidly and will be harvested within a week if the straw is long enough to bind. The most of the grain is too short to bind and will be cut with a header.

Mr. A. C. Dillman spent the last of the week at the Station.

Maximum temperature 99, minimum 54, precipitation .05 inch.

Big Springs

Maximum temperature for the week 108, minimum 69, wind velocity 8.6 miles, evaporation 3.19 inches, precipitation 0. The weather has been dry and hot since last report and crop conditions are still unfavorable. The broomcorn and other crops planted the week before are up to a good stand but are starting slowly. The total rainfall for June this year is 1.59 inch, which fell in six showers, the heaviest at one time being .69. The rainfall from January 1st to July 1st for this season totals 5.72 inches and for the same period for 1915, 9.2 inches. The work of the week has consisted of cultivating trimming plats, and putting a concrete floor in the tool house.

The temperature for June has ranged high this year, there being 14 days in the month with a maximum of 100 or above, the hottest temperature being 108.

Attention of the field men is again invited to the meeting of the Great Plains Cooperative Association to be held at Amarillo, Texas, August 22-24, 1916. As the Programme Committee is now arranging the addresses to be delivered on that occasion, it is requested that any of the field men who have papers in course of preparation to be read will communicate immediately with W. W. Burr, Lincoln, Nebr, giving if possible the title of the subject to be treated.

Under a ruling of the Comptroller, the question has been raised as to whether or not field men will be reimbursed for gasoline consumed in their private owned motor driven vehicles while on official trips. As soon as a definite decision is arrived at, field men will be advised.

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WEEKLY STATION REPORTS

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U. S. DEPARTMENT OF AGRICULTURE.

JUL 15 1916

WEEKLEY STATION REPORTS
DRY LAND AGRICULTURE INVESTIGATIONS
JULY 15, 1916.

Reports for Week ending July 8.

Akron

The past week has been very hot and dry. Wheat has ripened rapidly and a large part of the winter wheat will be harvested this coming week. The prairie grass is dry enough to burn. Corn is growing well but rolls badly during the day.

Dr. L. J. Briggs arrived the 5th and will spend a week or two here. Mr. J. Allen Clark visited the station Friday and Saturday.

Maximum temperature for the week 98, minimum 55, and precipitation 0.05 inch.

Amarillo

Cultivation of row crops and harvesting of oats and barley have been the main items on our program this week. Harvesting around the country is pretty much done and threshing is now under way. The spring wheat will be ready for harvest next week. Continued hot, dry weather is causing the corn and sorghums to roll a good deal, but the moisture supply in the ground will keep these crops up for some little time yet. The thistle growth in the spring grain plats has been very heavy this season, in some of them in fact, the grain was well nigh killed out. It gives us some mean stuff to deal with in threshing and the situation also calls for treatment of the stubble ground with reference to doing away with the weeds.

Mr. B. E. Rothgeb of the Cereal office arrived today to look after the Grain sorghums on the station.

Maximum temperature for the week 101 on the 3rd, minimum 58 on the 7th, hourly wind velocity 7.7 miles, precipitation T, and evaporation 2.829 inches.

Ardmore

Maximum temperature for the week 94, minimum 40, precipitation 0.06 inch. Total precipitation for the month of June 2.58 inches, same month last year 6.67 inches. The past week has been unusually warm and very favorable for the growth of corn. Small grain is all headed at a height of about thirty inches. All crops are doing well and none have so far suffered for the want of moisture.

Ardmore

Maximum temperature for the week 98, minimum 48, and no precipitation.

The entire week has been very hot and dry. There has not been any precipitation of sufficient amount to be of any benefit to crops since June 23rd.

Spring wheat and oats are just beginning to suffer for the want of moisture. Winter wheat and winter rye will make good yields of grain even though no more rain falls until after harvest. All corn and sorghum plats are in excellent condition and are making a very rapid growth. They should not suffer for moisture for two or three weeks even though there is no precipitation in the meantime.

Winter rye and Canada field peas were plowed under during the week and both crops supplied and abundance of green manure. The winter rye was about five feet high and the canada field peas fully three feet high. It is estimated that the field peas would have made a yield of at least two tons per acre.

Some brome grass and alfalfa plats were harvested during the week. The yields from both crops were good. The alfalfa yields were all better than one ton per acre and the brome grass yielded from one ton to one and one-half ton per acre.

Mr. John S. Cole and Mr. D. H. Stely arrived at this station Sunday, July 9th. Mr. Cole left for Denver the same day and Mr. Stely will remain at the station for some time.

Bellefourche

Extremely warm weather has prevailed during the whole week. Crops that have had sufficient moisture have made very rapid growth. Many plats are showing the need of water. A few have commenced to fire badly. All plats that have suffered badly so far are either in the MC series or in rotations where small grains follow a hay or grain crop. The subsoiled plats of wheat, oats and barley are in a very critical condition.

If rain comes within the next few days prospects for a large crop of all grains are good. If no rain falls within a week there will be practically no grain to harvest.

The peas and sweet clover have grown very well. The peas are now ready to plow under.

Most of the corn plats were thinned and a few of the grain plats were rogued during the week.

Maximum temperature 99, minimum 52, no precipitation.

Big Springs

Maximum temperature for the week 99, minimum 65, precipitation 0.01 inch, wind velocity 6.0 miles, evaporation 2.65 inches. The week has not been so hot as formerly, which has been some relief from the prevailing extreme conditions. A few scattering showers have occurred in parts of the county, but they were light. A three acre block of sudan grass was harvested during the week, and a yield was obtained of 1/2 tons of hay per acre. The above block was planted in three foot rows. A few of the crops in the plats show signs of heading out. A special strain of white milo, which was planted on May 8 is out in full head. Feterita planted on May 4th will soon be in head and a number of cotton plats have considerable blooms out and the stalks are loaded with squares. The cotton is short for this season of the year. The hot weather, with daily and night temperatures ranging high, has caused all crops to mature rapidly.

Colby

The week has been dry, sultry, and hot for the most part. The winter wheat and barley plats were cut this week. The wheat was all tall enough to bind well but the barley was too short for good work. The oats will be ready by the first of next week while the spring wheat will not be ripe before the end of the week at the earliest. Corn is going very nicely, but the sorghums are disappointing. It is very doubtful that a stand of milo will be secured even from the third planting. Grasshoppers are a real menace this year. The corn will be in very serious danger after the small grains are removed unless the number of hoppers materially lessens. Frequent poisoning appears to be only partially effective in checking them.

Maximum temperature 100, minimum 53, evaporation 2.246 inches, precipitation .57 inch, and average hourly wind velocity (2') 6.9 miles, (8') 9.4 miles.

Dalhart

Any dount as to whether or not there would be any small grain to harvest was definitely settled by a heavy hail storm which occured about 5:30 PM on the afternoon of July 4th. This is the latest date at which a damaging hail storm has ever occurred and makes one more unexpected addition to the most erratic season that I have ever seen. The corn and the sorghum crops while considerably damaged will recover but will probably be set back at least two weeks. Cowpeas and soy beans were entirely destroyed.

Maximum temperature for the week 102, minimum 55, average maximum 95, and total precipitation 2.45 inches.

Edgeley

Two heavy rains occurred early in the week, while the remainder of the week was warm and damp. All crops have been growing fast. The early barley is practically all headed, and the wheat and oats are just beginning to head. Corn has been shooting up rapidly. But little field work was accomplished because of the weather conditions. The corn on Sec. 9 was cultivated once.

Prof. Shepperd visited the station for two days.

Maximum temperature 87, minimum 50, and precipitation 2.15 inches.

Garden City

All crops came through the hot dry weather of the past week in good condition, and corn made a very good growth. Another week of high temperatures and hot winds, however, will probably cause it to fire. Sorghum crops and cowpeas are just beginning to make rapid growth. Some Sudan and other sorghums on irrigated land are heading out at a height of about two feet.

A campaign was started the latter part of the week against grasshoppers which are doing considerable damage to the D.L.A. corn plats. The grasshoppers, however, seem to be more than holding their own in the fight. Poisoned bran mash was destributed in the corn plats, and a solution of Paris Green (1 to 50) was sprayed on weedy places along the roadways bordering the plats and other localities where young hoppers were feeding in large numbers on weed growth.

Maximum temperature for the week 101, average maximum 95, average wind velocity (2') 9.8 miles (8') 13.7, evaporation 2.961 inches, precipitation none.

Havre

July 1

The past weekrhas been decidedly the most favorable for the growth of crops of any week to date this season. Precipitation was recorded on 4 days with a total of 2.03 inches. Although the maximum temperature of 79 was not high for this season the minimum was 49 and the mean minimum has been high. The humidity has been high and the total evaporation for the week was only .915 inch.

Aside from weeding and a small amount of cultivation the field work has consisted in breaking sod. At times the sod has been so wet that it does not break in good condition. The fallowing to be done this season is on land that was broken from sod last season and was not cropped last season. For three weeks this ground has been too wet for plowing. Pepper grass, mustard and blue joint are beginning to grow rapidly now.

Havre (continued)

Oats and spring wheat headed during the week and the few flax plants that came up immediately after seeding are in the bud. A few potato plants are in bloom. Blue joint has made a very good growth on the unpastured prairie and in many of the low places hay can be cut.

The total precipitation for June was 4.36 inches as compared with a normal for 36 years of 2.82 inches. This season precipitation was recorded on 17 days with 9 days on which there was more than .10 inch. Yesterday and last night there was aheavy rain accompanied by wind and this morning (July 3) much of the barley and spring wheat is lodged.

July 8.

The weather during the past week has been warm with some precipitation which has stimulated crops especially corn. A rain of 1.71 inch has been recorded which fell in three showers all of which were torrential in character resulting in a large percentage of run off. The absolute maximum temperature was 86 on the 7th with a mean maximum of 80. The minimum temperature was 48 on the 4th with a mean minimum of 58.

A large difference was noted in the amount of run off from spring breaking, between plats that were disked and cultivated and those that were left rough, the rough plats retaining a much larger percentage.

Professor O. B. Whipple, Horticulturist of the Montana Experiment Station visited the station during the week looking into the possibilities of starting some work next year with trees and possibly with some fruit.

Huntley

Warm days and nights during the past week have been very favorable for corn and a growth of eight to ten inches has taken place on some of the plats. Spring grains are all filled and flax is in the boll. Winter wheat is ripening on the fallow plats that were badly dried up earlier in the season. Many of the heads have no grain in them at all. Thinning corn and cleaning alleys was continued during the week.

Maximum temperature 99, minimum 45, and precipitation T.

Lawton

Although 95 is the highest temperature recorded during the past week the heat has been oppressive, due to the fact, I think, that we have had extremely little wind. The absence of strong wind movements is in marked contrast to the windy days of June. On the fifth a heavy dashing rain amounting to 1.60 inch fell with in a short period. Practically

Lawton (continued)

all of the rowed crops had just been cultivated and the loose soil washed rapidly. On Friday and Saturday several loads of wild hay were cut and put in the barn. The hay this year is fairly good in quality.

Milo and winter rye seeded in Rotations 249 and 251 on the first of July will have to be replanted on account of poor stand obtained the first time.

Chinch bugs have destroyed practically all of the Milo in Field B and the Milo, Feterita, and some of the sorghum varieties in field C. The kafir in these two fields has been injured to some extent but at present it would seem as though it will produce a crop provided that weather conditions do not become severe. The kafir seeded on the 21st of April is just shooting the heads out of the noot. Broom corn in MC H in field A is also beginning to head. Corn in field C, planted the 23rd of March has a good many roasting ears and corn in field B planted on April 10th has just an occasional ear that is in the roasting ear stage.

Early Buff cowpeas seeded on the 3rd of April were cut for hay test on the 6th. The forage on this variety is light but the yield of seed will be pretty good. The Early Buff is the earliest of any of the varieties planted. The Early Brabham and Groit promise to be good forage varieties. Of the Soy beans the Chiquita seems to be the most promising. The Haberlandt, however, seems to be very good and is the earliest variety that we have in the test.

The cotton plants are forming a few squares and I think the crop as a whole is doing as well as could be expectected.

Mandan

The week has been unusually warm and as a result all crops made a rapid growth, particularly corn, which had made but comparatively little growth previously.

Oats and wheat are fully headed. They are as early as they were last year. Alfalfa and brome grass have been harvested in both the rotations and the forage crop test.

As the weeds are growing rapidly, all available help has been kept busy hoeing and cultivating.

Water connections have been made on the grazing tract.

Mr. Pfaender gave a Market Day address at Fort Clerk on the eight.

Maximum temperature for the week was 95, minimum 57, and precipitation .54 inch.

Scottsbluff

We have had no rain since June 12th and with temperatures varying from 89 to 96 degrees the past ten days, everything is beginning to burn. Soil samples taken on MC wheat and corn show the former to be dried out down to six feet. Corn still has considerable moisture. Very little of the June precipitation was stored in the soil. The total for that month was 2.14 inches, 2.06 inches fell June 12th and 1.50 inch of that fell in fifteen minutes. So the crops have had very little to go for the last five weeks.

Recently, railroad men have been surveying up through this section for a spur through to the sugar factory. It will be built if the required beet acreage for the next three years is signed up. In that case, the line will cut northwest through the station and include considerable of the dry land plats. All of which goes to show that there can be things worse than hail, dust and wind combinations.

North Platte

The week has continued hot, dry and windy. Winter wheat has ripened very rapidly. A few plats of an early variety were cut July 3. The binder is being run today. All winter wheat in this vicinity will be ripe the first of next week. Harvest of spring grain will follow almost immediately if the weather continues as it is at present.

Maximum temperature for the week was 95, minimum 54, mean 77, precipitation .02 inch, and evaporation 2.114 inches.

Sheridan

A horse was purchased to replace the one that died.

Work on sewer was completed with the exception of the drain on the septic tank.

Work was begun on a water system, but this will have to be suspended on account of the temporary shortage of funds.

The teamster's cottage was plastered, the foundation for the office was completed and a part of the cellar walls abd foundation for the residence.

Four horses have been at work breaking, The ground is now getting very dry and breaking is hard.

Mr. Willey returned Friday night and Cole and Stely left Saturday.

Tucumcari

Maximum temperature for the week 104 on the 4th, minimum 61 on the 2nd, evaporation 2.875 inches, average hourly wind velocity 5.8 miles, and precipitation .48 inch, consisting of .19 inch on evening of the 1st, and .29 on the evening of the 4th. Both of these showers were local in character. On the 4th at the time we had .19 inch, in Tucumcari they had .85 inch and on Goldenbergs' ranch, one mile north of us, only a few drops fell while still further north and east it is reported that over and inch fell. We are certainly having an opportunity to "Dry Farm" this season.

Milo planted on the 6th and on the 14th of April, in dates of planting work is heading out at a height of only about 14 inches.

A number of plats have been replanted this week, this being the first time since the main planting season when there has been enough moisture in any of the surface soil to germinate seed. It is doubtful if all that we have replanted will come up without more rain.

Spring wheat, such as it is, is ripening fast and will probably be cut this next week.

A trip was made to Las Vegas this week and if anything, the season is even drier there this year than here. Beans planted there over a month ago are not up yet. Some very good fields of Field Peas were seen. Corn, which is one of their main crops, was looking badly. Winter rye was looking fine, although a little short. According to M. R. Gonzalez, the County agent for San Miguel Co., the following crops in order of importance are grown there under dry farming conditions:

Corn, N.M. Pinto beans, spring wheat, spring oats, spring barley, winter rye, speltz, feed sorghums, grain sprghums (do not always mature), Millets, Sudan grass and field peas. Their annual rainfall is about 18.55 inches a good part of which falls during the growing months. The altitude is about 6300 feet.

Two weeks ago a trip was made to Clovis, N. Mex., over Sunday and a good many nice fields of crops were noticed on the way. The important crops in that section are the sorghums for grain and feed and winter wheat. The wheat this year will not average much more tha 10 bushels according to reports. Corn was looking good at that time although stands were very thin. The principal method of farming row crops in Eastern New Mexico is with the lister, in most cases double listing.

The best looking crop on the station is cowpeas. This crop appears to be the best drouth resister and continues to make a rapid growth with practically no rain. The best plats of milo in the field are those following cowpeas, appearing better even than those following a fallow.

Tucumcari

A plat of Canada field peas on the station has practically bruned up. Indian corn, in nearly every instance has a better color and is making better growth on fall plowed land than on spring plowed land.

Black locust trees set out following a rain in April are still looking well although we have had nothing but small showers since and although none of these trees have been given water.

Williston

It has been very hot for the past week, and there has been no precipitation. Crop growth is good, and the moisture is still holding out well. Corn has made a wonderful growth in the past ten days, but is still short of "knee high by the Fourth of July".

Barley and wheat are headed, and oats are beginning to head.

Preparations are complete for the County picnic to be held on the 14th instant when a large crowd is expected, weather permitting. These picnic are usually attended by from 3000 to 5000 people.

Maximum temperature 92, minimum 47 and precipitation none.

Woodward

The past week has been very dry and hot. Every thing on the station has made exceedingly rapid growth. Most of the work has been cultivating.

Mr. Rothgeb visited the station this week in the interests of the broom corn and grain sorghum work.

NOTE

All field men who have not yet returned all transportation requests issued to them during the Fiscal year 1916, will please do so, as such requests cannot be used duringthe Fiscal year 1917.

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JUL 22 1916

WEEKLY STATION REPORTS
DRY LAND AGRICULTURE INVESTIGATIONS
July 22, 1916

Reports for week ending July 15.

Akron

The past week has been very hot and dry. All the winter wheat is harvested or ready to harvest. Oats and barley on the rotations were harvested during the week. The most of the wheat is of good quality except on summer fallow which produced too large a growth of straw to fill well. Spring wheat is drying up and a part of it will be harvested the coming week. Corn is beginning to tassel but is burning so badly that it cannot set ears unless we have rain soon.

Maximum temperature for the week was 97, minimum 54, and precipitation 0.37 inch.

Amarillo

The drouth continues unabated but at last a week has been put over with only moderate winds prevailing. All small grain crop harvesting was completed this week, the spring wheat on the D.L.A. land being harvested Tuesday. The work of hoeing and thinning the row crops also has been completed.

Weather for the week was - maximum temperature 96 on the 10th, minimum 61 on the 13th, wind velocity 6.2 miles hourly, precipitation .06 inch and evaporation 2.560 inches.

Big Springs

The weather for the week has been considerable cooler than those preceding. It has been threating rain for most of the week but the precipitation has been light. Maximum temperature 98, minimum 65, wind velocity 4.9 miles, evaporation 2.65 inches, and precipitation .06 inch.

We cut three plats of Sudan grass that were fallowed last year. The average height of the three plats is a little over four feet and the estimated yield will be a ton or more to the acre. This Sudan was planted on the 6th of May and has stood the dry weather remarkably well. Milo and feterita is heading out on the fallow and fall plowed plats. The spring plowed and spring listed plats planted to milo are suffering for moisture and we will have to have rain soon to secure any yields on a number of the plats. Cowpeas are growing rapidly and promise a fair crop. Milo and other crops on fall plowed land planted to cowpeas last year, are holding up better than on the continuous

Big Springs (continued)

cropped plats. Most of the week has been spent in cultivating, hoeing and taking soil samples. Peaches are ripening in our orchard and the yield will be heavy on most of the trees, but the fruit will be small unless we have more moisture soon. An invitation has been extended to visitors for Sunday afternoon, the 16th.

Colby

The week has been hot, dry and windy for the most part, The winter wheat on the large fields of the station was cut as were also the oats which were sown as a nurse crop for the alfalfa. All the kafir and surface planted milo plats were cultivated the first time. The milo stand will probably not be good enough to leave. There is a fair stand of kafir. The listed corn was gone over for the third time as the disk cultivator had not filled in the ridges the second time over. The surface planted corn is in such good condition that two cultivations will probably be sufficient for the season. All corn plats, except the one summer fallowed last year were wilting badly today. The ground is very dry. All plowing with mould board plows has ceased on account of the dry weather.

On account of the good height of the winter wheat this year an unusually large number of binders are being used. On two of the largest farms in the county tractors are used to pull the binders, each tractor pulling six, seven-foot binders. A man sits on each binder to tend the machine and do the steering.

Weather for the week is as follows: Maximum temperature 97, minimum 57, average hourly wind velocity (2') 6.7 miles (8') 9.5 miles, evaporation 2.281 inches, and precipitation .34 inch.

Dalhart

All of the cultivated crops have made more growth during the past week than in any previous two week period. During this time we have had a minimum amount of wind and temperatures have not been excessive. It has been easy to do a good job of cultivating and we are freer from weeds than at any time during the summer. Several still days in succession is causing considerable anxiety among the farmers on account of a scarcety of water.

Maximum temperature for the week was 94, minimum 59, and precipitation .10 inch.

Edgeley

Warm, for the most part clear, but very humid weather prevailed throughout the week. The mornings have frequently been foggy and with but little breeze, the vegetation remaining wet for a considerable portion of the day. Black rust has appeared on the wheat, although as yet the stems appear to be clear of it. Crops are for the most part looking uniformly good, but there are many poor pieces of oats. Many of the oats plats on the station are quite poor, while some are very good. The fall plowed and disced plats seem to have the poorest stand.

All of the corn was cultivated early in the week, and the rotation plats hoed and thinned. All of the fallows have been plowed, and the green manure and M.C. fallows packed also. The clover plat in Rot. 11 has been cut but not hauled yet.

The alfalfa from the first cutting was hauled Monday. The yield from the two-year old seeding was 3070 pounds permacre, and the from last years seeding 2680 pounds per acre.

Maximum temperature for the week was 87, minimum 58, and precipitation .65 inch.

Garden City

The weather for the past week has been hot and dry as usual, the maximum temperature having gone above 90 every day. As a result most of the corn plats have begun to dry up.

Grasshoppers are still numerous but the fight made against them last week killed large numbers of them. Paris green sprayed on weedy places about the project proved especially effective. It was three or four days before any dead hoppers were found in such places, as the poison takes effect very slowly.

Thrashing of small grains was started the latter part of the week. Only the winter wheat has been threshed to date and the yields secured are as follows:

	Bushels per Acre		Bushels per Acre
M.C.C.....	6.2	Rot. 91 B...	7.2
Methods of Fallow I	6.3	" 324 A...	8.0
" " " K	6.3	" 324 B...	3.0
" " " M	8.5	" 331 B...	12.8
" " " O	4.7	" 331 C...	3.3
" " " Q	3.3	" 332 B...	14.8
Rot. 20 B	8.7	" 332 D...	11.3
" 28 B.....	6.8	" 37 B...	1.2

Average.....7.0

Maximum temperature for the week 99 on two days, minimum 60, wind velocity (2') 6.5 miles (8') 9.2 miles, and precipitation .16 inch.

Havre

The past week has been decided the most uniform one of this season. The maximum temperature for the week was 89 recorded on the 11th, while the lowest maximum was 82 on the 12th. Another heavy dashing rain fell last Sunday evening when .75 inch fell in about twenty minutes. This is the second storm of this kind in this month and the present precipitation is above normal for the month but a large percentage has been lost in run-off.

Work on the plats during the past week has consisted in cultivating the corn for the second time, in plowing the fallow plats and in cleaning the alleys and roadways. All the oats plats were rogued of a small percentage of barley which was in the seed.

Crops have all made good growth. Oats and barley are beginning to turn, winter rye will be harvested in a few days, winter wheat is in the very soft dough stage and spring wheat in the milk. All small grain crops with the exception of spring wheat should now mature to fair crops unless there are unusually unfavorablecconditions in the next few days. Corn is above knee high and is doing nicely. Flax is in full bloom.

Mr. F. E. Cobb of this office has been at this station the past two days attending to shelter belt inspection work.

Hettinger

Very warm weather has forced the crops along at too rapid a rate. Corn is now about three feet high and all grain is headed. Gatami barley will be cut in a couple of days. The drought was temporarily broken by small showers the past two days but more rain and cooler weather are needed. Brome grass on rotation 12 yielded three tons the first cutting. The tame grasses are all good and the prairie grass is the best it has been in years.

The writer took a trip throughout the Mott country north of here and attended a Demonstration farm picnic at Mott early last week giving a short talk on the work of the station and office. The crops near Hettinger were sharply contrasted with those further north where the stubbling in continuously system is in vogue. The great abundance of moisture this spring caused many farmers to stubble in this year but a lesson is being learned that will not be forgotten by them until next time the moisture is abundant.

The highest temperature recorded so far this year is 94. Rainfall is still above normal.

Lawton

Hot, quiet, sunshiney days have prevailed during the last week. The rain of 1.60 inch on the fifth of July was very local and many farmers are needing rain badly. The hard dashing rains such as the one mentioned give only temporary relief to the crops and a good rain may usually follow within a few days with much benefit. All of the rowed crops that have not been "laid by" for the season have been cultivated during the week. Kafir in field B and the replanted kafir, milo, and feterita in the plats in field A have been thinned to a uniform stand during the week. Sweet clover and alfalfa are only about 6 to 8 inches high and do not seem to be able to make much growth. Sweet clover seems to be suffering from the dry weather more than alfalfa. It is also noticed that cowpeas seeded in rows three and one-half feet apart are making more growth and standing the hot dry weather better than cowpeas seeded with the grain drill at the rate of 50 pounds per acre.

The first date of seeding of Sudan grass was cut on the 13th. The yield both in rows and broadcasted with the drill will be very light due to chinch bug injury. All of the milo and most of the feterita in the variety tests on the west end of the farm had to be replanted on the 13th. The land was replanted to kafir as this crop has suffered the least of any of the crops from chinch bug injury. It is of course, pretty late to seed kafir but the land may, at least be kept in a uniform condition for future work. Milo, kafir, and broom corn in plats MC H are heading. Milo in MC F and G were replanted on July 15.

The following plats have been disked during the week: MC-D wheat, cotton, broom corn, sorghum, corn, milo, kafir, and feterita. 5B and 8B, 274A, 275A, 1 A and C, 6 A and C, 4 A and C, MC-B wheat, 3 A and C, 7 A and C, 9 A and C, NC-E, G and H wheat, 2A and C, 5 A and C, 8 A and C, 14 B and F, 252B, 274B, 133 B and D, 253B, 275B, 134 A, B, and D.

The following plats were plowed: MC-B and E wheat, 142B, 133D, 134 A and D.

The following plats were listed: MC-F-G-H. Plat H was given 2000 pounds of manure and the ridges will be busted later. The average maximum temperature for the week was 95.6.

Mandan

Corn and sorghums have been given second cultivation during the week. Corn is making rapid growth and starting to tassel. Forage crops were hauled in and weighed during the week. Excellent yields were gotten from most plats.

Mandan (continued)

About 60 boys from the Boys Camp which has been held at the Chautauqua Grounds during the past week visited the station on the thirteenth.

Mr. Thomas Cooper, Director of the North Dakota Experiment Station also visited the station on that day.

All crops made an excellent growth during the week as a result of the hot weather and precipitation.

Maximum temperature for the week was 93, minimum 61, and precipitation 1.08 inch.

Hays

Maximum temperature for the week was 101½, minimum 61½, and precipitation, total of three showers, .35 inch.

This has been the hottest and most severe week on crops thus far this season. The maximum temperature has reached 100 three days and 99 one day, and there has been noticeable, hot winds at times different days.

The showers during the week were so small they were of no benefit to the crops. All row crops are wilting badly and in some places the corn is burning considerable.

Spring wheat was harvested Monday. It was thin, weedy and poor, very poor. It did not mature naturally, but just dried up and died, the quality is very poor, and the yield almost nothing.

Kafir plats and shelter crops were cultivated during the week. One plat of brome grass mowed, weeds cultivated out of roads. Some dirt was hauled to fill up low places to prevent water from washing across plats during heavy rains.

Blister beetles and grasshoppers are demanding considerable time. Poison has been spread nearly every day during the week for the grass hoppers which continue coming in from adjoining fields on three sides of the project. Blister beetles commenced today, damaging corn, shreading blades, eating off silks, and the shucks at tip of ear. It is the first time they have ever worked on the corn for us. They have in previous years worked on alfalfa and certain kind of weeds. We have today been trying to feed them fresh mown alfalfa which was first immersed in a poison solution. These beetles are doing considerable damage in the large alfalfa fields, eating off the bloom and more or less of the leaves. They are so bad that it has become necessary to mow some of the fields for hay which were intended to be left for seed crop.

Considerable soil moisture work was done during the week among which were some ten foot determinations.

North Platte

Another week has passed without rain. The last rain over .01 inch occurred on June 20, 25 days ago.

Corn continues to grow but the blades are rolling during the middle of the days. Alfalfa is cutting a short second crop.

Most of the harvest will be out of the way next week. Spring wheat is ripening three weeks earlier than it did last year.

Maximum temperature for the week was 98, minimum 58, mean 77, which is about 3 degrees above normal, and evaporation 2.076 inches.

Scottsbluff

No rain fell during the week and the temperature continued high. Corn is just about holding its own, satisfactory growth having been made so far. Everything else is at a standstill, or firing badly.

We are stacking the first alfalfa of the season on the station. The first crop was destroyed by the hail of June 12th. The hot weather caused a most remarkable growth, so that yields are expected to be good.

Sheridan

The weather has been very dry here and crops are burning badly. Dust is getting deep in the roads.

Haying is in full blast, but men are hard to get and farmers are offering $3.00 a day for men.

The sheeting is nearly finished on the roof and the walls of the barn and implement shed, and the mess house has been plastered and is ready for the painter who is expected on the job next week.

The foundation is in for the Superintendent Residence, and framing is being done on the office building.

Fencing is in progress.

Tucumcari

Maximum temperature for the week was 96, minimum 62, wind velocity 5.1 miles, evaporation 2.602 inches, and precipitation T on the 12th and 0.01 inch on the 13th.

During the week all roadways have been cultivated to kill weeds, the ornamentals and orchard trees on the farm have been cultivated and the spring wheat has been harvested.

The weather continues dry and warm and crops throughout the county are very backward in growth and poor in stand. Crops on the station are still alive and of good deal of the milo is in boot with some fully headed. Heads are not above 30 inches high anywhere so far.

The wheat harvest on the Staked Plains to the south of us, is completed and threshing is well under way.

Spring crops in the county are at least a month behind normal and unless the drouth is broken very soon, this season will bid fair to be as poor as the very dry year of 1910.

Williston

Crops are in need of rain as there has been no precipitation since June 30. There has been no actual suffering, but the lower blades of small grains are beginning to fire on the lighter soils.

The weather continues hot, and new for a period of two and one-half weeks there has been consistently warm weather with warm nights very unusual for this section. This has made wonderful growth in the corn, which has now recovered from the cool weather early in the season, and is at about a normal stage. Maximum temperature for the week 94 degrees, minimum 56 degrees, and no precipitation.

The County Picnic was held on the station yesterday the 14th inst. There was an attendance of about 1500 people, and the interest of the crowd was good. Prof. Shepperd, Vice Director of the North Dakota Experiment Station and Mr. D. E. Willard, formerly Chief of Soil Survey in this state, were the principal speakers.

Woodward

The past week has been consumed in cultivating. The weed growth which started so heavily in June is just being gotten under control. Over the country generally there is nothing but weeds with scattered fields of late stuff and milo planted the first days of July. Chinch bugs are very bad this year, however, so that the milo which they like above all other sorghum crops will probably be killed by them, which leaves small possibility of a grain crop of any kind.

On the station the earlier sorghum crops are just heading with a very short stalk. While in their younger stages these crops had plenty of rain, this stopped when they were a foot high or less, a severe drouth set in and they started to form a head quickly. Milo on the station as elsewhere is in some cases nearly gone with chinch bugs. Other crops seem to be little damaged so far by the bugs, and although they are covered with plant lice to an extent that is seldom met, they seem to be doing nicely, and will probably come out all right if timely rains come

Belle Fourche

Maximum temperature for the week 98, minimum temperature 57, and precipitation .71 inch.

A rain of .71 inches on the 10th, stopped the crops from firing. Only about ten plats were severely injured, though the growth on nearly all the plats was checked. It now appears that there will be a fair crop of oats, some of which will be rather light. The wheat is filling out but will not be plump unless another rain comes soon. Barley on most plats is well filled.

All plats of barley and a number of plats of oats are ripening and will be ready to harvest early next week.

Corn is now about two feet tall and is growing well. Sorghum and potatoes are likewise in good condition.

Yields of hay crops are as follows: Brome 10C, 1.08, broma 12E, 1.30, alfalfa 42A .58, Alfalfa 42F .68, and clover 11C .50 tons per acre.

The growth of the alfalfa was checked severely by drought.

Huntley

The hot weather continued all week and spring grains especially wheat are drying up badly. Oats and barley are beginning to mature and corn is tasseling. Rye and peas were harvested early in the week and winter wheat later. Straw of the wheat was too short to bind well which made harvesting difficult. Hogs on pea pasture gained and average of 1.59 pounds per day for ten days.

Maximum temperature for the week ending July 15 was 100, minimum 51, and precipitation .12 inch.

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Land Agriculture
1916

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

JUL 29 '16

WEEKLY STATION REPORTS
DRY LAND AGRICULTURE INVESTIGATIONS
July 22, 1916.

Reports for week ending July 22.

Amarillo

The drouth of the week was temporarily relieved by a small shower of rain .58 of an inch in amount on Wednesday. High temperatures still prevail but winds have been more moderate of late. Threshing of the D.L.A. small grains was done the fore part of the week and a tabulated list of the yields accompanies this report. The grain is of rather poor quality, shriveled -the wheat grading around 55 to 58. The threshing was done this year while the grain was in dry and good condition since harvest. The stubble ground was double disked to destroy weed growth, an object that was only in part attained. However, if weather continues dry the disking will have given the thistles a setback that will hold them fairly well on plats to be early fall plowed.

Weather for the week was as follows:

Max. temp. 99 on the 18th
Min. " 58 " " 22d.
Hourly wind 6.5 miles
Precipitation .58 inch
Evaporation 2.654 inches.

Following is a table of crop yields for this year on D.L.A. plats on the basis of bushels per acre:-

Plat or Rot.	W. Wheat	Sp. wheat	Oats	Barley
M.C.A	5.8	3.5	5.0	1.3
B	3.6	7.0	12.2	3.8
C	4.8	4.7	5.1	2.7
E	4.5	1.2	.9	.2
F	6.8	.9	1.9	.7
G		2.1		
H		7.7		
J		8.5		
L		6.8		
N		4.3		
Rot.1		1.7	2.5	
2		1.9	1.3	
3		.6	.3	
4		.5	1.3	
5		5.2	.6	
6			.3	.3
7			1.0	.3
8		.2	3.1	
9		2.3	1.6	

Table of yields from Amarillo Station continued.

Plat or Rot.	W. Wheat	Sp. Wheat	Oats	Barley
Rot. 20	4.9		4.1	
22	4.1		4.1	
24	5.4		5.6	
26	4.3		8.8	
28	5.7		1.6	
29		5.3	3.8	
30		5.8	2.2	
91	4.3		3.4	
93	3.0		4.5	
95	4.3		4.5	
97	2.8		12.5	
570		2.3		
Averages 1916	4.6	3.6	3.7	1.3
Last. yrs. avgs.	15.7	11.5	31.9	17.0

Big Spring.

The weather for the past week has been quite warm and the drouth remains unbroken. Maximum temperature 103, minimum 63, wind velocity 4.8 miles, evaporation 2.330 inches, precipitation, trace.

Most of the plats and some of the field crops were cultivated and hoed during the week. Soil samples taken on CC milo the first of the week show that nearly all of the available moisture has been used by the growing crop.

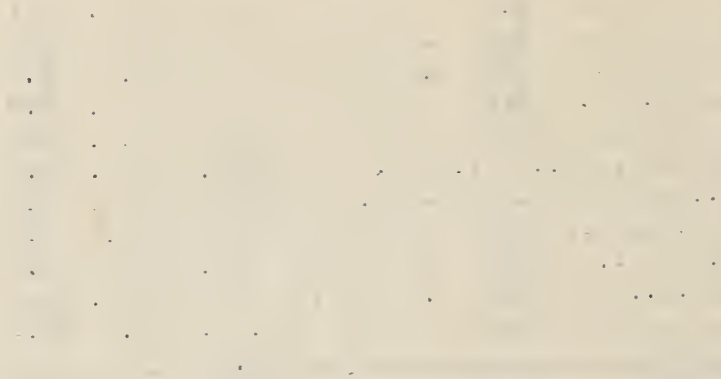
Early Buff cowpeas were harvested during the week but the yield will be small.

Colby

The dry spell which has prevailed since about the middle of June was broken by an inch of rain Friday. The fore part of the week was very hot andcorn had begun to curl very badly. The corn on the plat summer fallowed last year was the only corn on the station that was not drying. Sorghums had been making very little growth.

The spring wheat was harvested Monday and Tuesday. The rest of the week was spent in cultivating the plats and fields of corn and sorghums not on the D. L. A. project. The D.L.A. plats of milo that were listed were also cultivated. The threshing will begin Monday.

Weather for the week:-Maximum temperature 100, minimum 62, average hourly wind velocity (2') 8 mi. (8') 11.2 miles., evaporation 2.893 inches, precipitation 1.01 inches.



Dalhart

The weather during the past week has been very warm and dry with considerable wind. All of the crops have made less growth than during the previous week. Corn is tasseling out at a height of from three and one-half to five feet and milo is heading but is very short. Weeds are very troublesome as is usual during a period of dry weather. All of the moisture from the rain of July 4th., hasbeen used up and unless more falls within the next few days crops will be suffering.

Maximum temperature for the week 97, minimum 57, Precip. none.

Edgeley

Prospects for agood crop of wheat through this section of the state have gone glimmering during the past week. It now merely is a question of whether there is going to be any wheat al all. The rust is very bad on the Marquis, which is only in the soft dough stage, and the plants seem to be dying, or drying up. To begin with this wheat did not fill well toward the tip of the head. The durum wheat is not rusted as badly yet, but is not as far advanced as the Marquis. It is filling more evenly, but a spore disease seems to be present in the head which prevents the development of many of the kernels.

Oats are looking fairly well, although some fields are badly rusted. Early barley is good, and is nearly ready to harvest. Some winter rye has been harvested. The stand is rather poor. Late grain is in need of rain.

All of the cornvas cultivated once during the week. The clover from Rot. 11 was hauled and weighed. It yielded at the rate of 4000# per acre. A good stand of second growth alfalfa is ready for mowing.

Maximum temp. 89, min. 57, precipitation none.

Garden City.

No precipitation of value was received during the week and all dry land crops are practically at a standstill. Soil samples taken on the M. C. Corn indicates that with the exception of plat C nearly all of the available moisture has been used up. Our total precipitation for this month to date has been only .20 of an inch.

The spring sown small grain plats harvested were so weedy that it was impossible to thresh them, and the yields were estimated.

Maximum temp. for week 102, Average Max. 97. Minimum temp. for the week 59. Average wind velocity 2' ane. 7.1 miles, 8' ane. 10.5 miles. Evaporation 2.087 inches. Precipitation .04 inch.

Ardmore

Max. temperature for the week 94; minimum 54. total precipitation .48 inch. The rain came in two slow showers and was of noticeable benefit to corn, forage crops, and spring wheat.

All winter wheat, barley and most of the oats were cut during the week. The yields of winter wheat and barley will be excellent. Oats were seeded early on this station this year, and suffered materially for want of moisture during the month of April. They did not fill well, and probably noneof the plats will yield more than 50 bushels per acre. Flax has not been harvested, but will give a much better yield than last year. None of the spring wheat is ready for harvest. It is filling very nicely, and while the yield will not be as heavy as last year, all methods will produce apaying crop.

Corn is four feet high and is tasseling. Sorghum is about three feet high and is growing very rapidly. None of the cultivated crops have suffered for the want of moisture.

The Fourth Annual Farmers' Picnic was held on the station July 20th. While the attendance probably was not as good as during some previous years, a good crowd was present:- it has been estimated that there were about 1,000 people on the grounds. Many farmers in the vicinity of Ardmore were very busy with harvest and did not attend, but there was a very large attendance of business men from nearby towns. Over 100 automobiles came from Hot SPrings, Oelrichs, Edgemont, Oral, and Crawford and Harrison, Nebraska.

Bellefourche

Warm dry weather has caused all crops to mature rapidly. All oats and barley plats except those on spring plowing have now been harvested. Wheat and winter wheat are just commencing to ripen.

Corn is beginning to tassel and sorghum is making good growth.

The Farmers' Picnic was held July 22nd. Over eight hundred farmers attended.

The continued dry weather has greatly reduced the chances of obtaining any high yields of grain, but late seeded grain would be benefitted by any rain that falls from now on.

Mr. C. S. Scofield has been visiting the station since the 21st.

Mr. C. Larson of the S. D. State College and Mr. Benjamin Larson of the Dakota Farmer staff were here on the 22nd. Both were speakers at the picnic.

Max. temp. 95, minimum 53. Precipitation .17 inch.

Havre

On the evening of the 17th we had another torrential shower .82" falling in less than 20 minutes. This with .10" on the 18th brings the total for this month to date to 3.48", an compared with anormal for 35 years of 1.92"; however, this has mostly fallen in heavy showers with alarge amount of run-off.

During the week the mixtures of grain and peas and the second crop of winter rye were harvested for hay. Winter rye for seedwas harvested on the 22nd. Corn has made very rapid progress the past week a few plants now showing tassel. Flax is nearly out of bloom and is well "bolled". All grains are filling exceptionally well and the prospects for fair yields are very good. Yields in this part of the state will likely be as heavy as last year if not heavier. The range where it is not to heavily grazed is very good. Wild hay can be cut in many of the low places.

Hettinger.

Dry weather continues and the heat is forcing the grain much too fast. Some of the wheat heads are blighted on the tip. The rust is getting bad due to the dewy mornings. The red rust now on is the early stage of Puccinia graminis noe of the rubige-vera being noticed. Therefore there is more danger from this epedemic than most people suppose whoodo not know that the black rust is a later stage of the red rust. A trip was made out into the country with a party of grain men for rust inspection and many of the late fields are doomed. Kubanks durum seems to hold out better than any of the other varieties. No rust has been noticed on oats or barley.

Alfalfa is soon ready for the second cutting but brome grass has not made any growth since it wascut. Much time isbeing spent in thoroughly roguing the fields as this place is still infested with wild oats and mustard. Plat B of M.C.Wheat is so bad that it may have to be cut for hay.

Haying has commenced but the needle grass is so bad that late cutting will be better. Barley and oats varieties were cut Saturday.

Huntley.

During the past week oats, barley andpart of the flax were harvested on the rotations. Roads and summer fallow were disked. Corn is beginning to show the effects of the continued dry weather and on most plats has a wilted appearance during the middle of the day. Hogs were transferred from the pea plat to the plat of beardless barley where they will finish. While on peas they gained an average of 1.37 pounds per pig per day for aperiod of 20 days.

On the 22nd the Annual Project Picnic washeld at the farm; over 2,000 people being present.

Max. temp. 95, minimum 45. Precipitation .02 inch.

Mandan.

The weather for the week continued warm but was free from hot winds. All crops are growing rapidly, particularly corn and vine crops. Oats is ripening fast and will be ready to harvest the coming week, about two weeks earlier than last year.

Corn was given the last cultivation this week.

The backsetting of the fifty acre tract east of the country road has been completed.

Weeds are growing rapidly, necessitating the employment of all available men and horses for hoeing and cultivating.

The spraying outfit has been kept busy on account of the continued destrictiveness of the poplar beetles.

Mr. Gates, of the Office of Forage Crop Investigations visited the station on the 21st.

Maximum temp. 90, minimum 54. Precipitation .72".

Scottsbluff

On account of the dry hot weather weather which prevailed since June 12th., the hogs on the pasturing experiment were taken off July 15th. The alfalfa was eaten off entirely. There wasconsiderable sweet clover left, but it set seed and became woody, so that the hogs refused to eat more of it.

In looking over the following table it must be remembered that the experiment was not started until May 27th., at least two weeks later than it should have been. Also, on June 12th., when the hogs were turned onto the second tenth-acre plat, hail entirely ruined the crop, which stood two feet high at that time.

Corn is valued at $1.07 per cwt. and hogs $7.00 per cwt., the same figures Mr. Scofield uses.

	Lot 1 S.Clover	Lot 2 Alfalfa	Acre Basis: Lot 1	Lot 2
No. of hogs	2	2	10	10
Total grain, pounds	49	76	245	380
Ave. daily gain, pounds	1.00	1.55	5.00	7.8
Grain fed, pounds	219	214	1095	1070
Pounds grain per pound gain	4.47	2.81	4.47	2.81
Net return for pasture	$1.09	$3.03	$5.45	$15.15
Daily net return for pasture	.022	.062	.11	.31

Time of experiment, 49 days.

Sheridan.

The week has passed again with no rain. The roads are getting very dusty and dry land crops are burning badly. A great deal of small grain is being cut for hay.

The Office building is now ready for the shingles and lathers, and the Residence is having the rafters placed.

The Barn and Implement Shed is being sheeted on the walls and roof and siding and shingling is in progress.

One mile of the woven wire fence has been put in place and most of the posts set for the other mile of fence. Corn posts have been set in the soil instead of in concrete and are holding their place in good shape.

The contracting painter is at work on the Mess House and expects to finish his work within the coming week.

The field of sorghum which was planted for forage late in June still has a healthy color, and present prospects are for a good crop.

Tucumcari

Max. temp. 98, minimum 61. Ave. hourly wind velocity 5.8 miles per hour. Precipitation .17 inch. Evaporation 2.690 inches.

The weather continues warm and dry with the average amount of wind for this section. There have been local rains but nothing of any consequence has fallen on the station. We have not had a rain sufficient to make moisture meet for almost two months. Crops are all about a month and a half late in size but the milo and some of the saccharine sorghums are headed. Practically all of the normal planting of milo is headed at heights ranging from 14 inches to 36 inches. The normal rainfall for July is more than two inches, while during this two-thirds of the month we have had slightly less than 1 inch, all falling in such small showers asto be of little use to crops.

Work for the week hasbeen the ordinary routine. Except for 1910, this has been the driest year since weather records have been taken for this district and unless conditions improve very soon, this year will even equal that dry year. It is surprising how well the crops look after such a long drouth. None of the sorghums are showing the effects of the drouth except in size. Cowpeas are going ahead and making nearly as good growth as in anormal year. Cotton is very small and quite late. From our past experience and from the experience of others in this country who have tried cotton, this section was evidently not intended for accotton country, at least not until prices for cotton rise considerably.

Lawton

The maximum temperatures for the season to date occurred during the past week when the thermometer recorded 101 and 103 on the 18th and 19th. Corn, sweet clover and alfalfa were rapidly showing the effects of the hot dry weather. Cowpeas seeded broadcast with the grain drill were also firing. During the night of the 19th., a 3 inch rain fell with much benefit to all growing crops. This rain fell within about three hours and naturally there was much washing and a good deal of loss by run-off. However, all rowed crops and stubble land was in a very receptive condition and the surface soil has dried more slowly than it has at any time during the season. Where the corn provides plenty of shade the ground is still wet at the present writing. The driest parts of the farm could not be worked before Saturday afternoon and the ground was still heavy then. At the present writing the surface soil is cracking rapidly and cultivation will have to follow as fast as possible. Alfalfa and clover have recovered rapidly since the rain, but continued growth will not obtain unless the climatic conditions remain unusually favorable. The corn crop is pretty safe from now on.

Scottsbluff

With the exception of one day, the temperature has varied between 92 and 97 degrees all week. There were three small showers amounting to .30 inch. Six miles west of us a 4.00" precipitation was recorded in a few hours.

Winter wheat was cut with a mower. There will be little grain threshed as the hail hit it rather badly. Pea plats were plowed 7/21.

Mr. C. S. Scofield spent three days at the station during the week.

Williston

A rain of .84 inch on the 15th and 16th came in time to push the crops along and prevent any damage from drouth. All crops are in excellent condition. Barleys are turning and will be ripe in about a week. There is practically no rust in this section, and there have been no reports as yet from the adjoining territory.

Maximum temperature for the week 91 degrees, minimum 47 degrees. Precipitation .84 inch.

Mr. W. W. Burr visited the station on the 20th and 21st, being in this vicinity on tree inspection work.

Woodward

There hasbeen no rain here for 28 days, but sorghum crops are still looking well. They are heading short and if rain comes soon may make a good yield. Plant lice which at one time seemed a great menace are diminishing rapidly due to the activities of lady-bugs and possibly to some disease or parasite among them.

Corn has exhausted nearly all available moisture and is doomed to be beyond recovery with a few more days of drouth.